EXAMPLES
of
TRAFFIC CONTROL PLAN SCENARIOS

Table 6H-2. Meaning of Symbols on Typical Application Diagrams

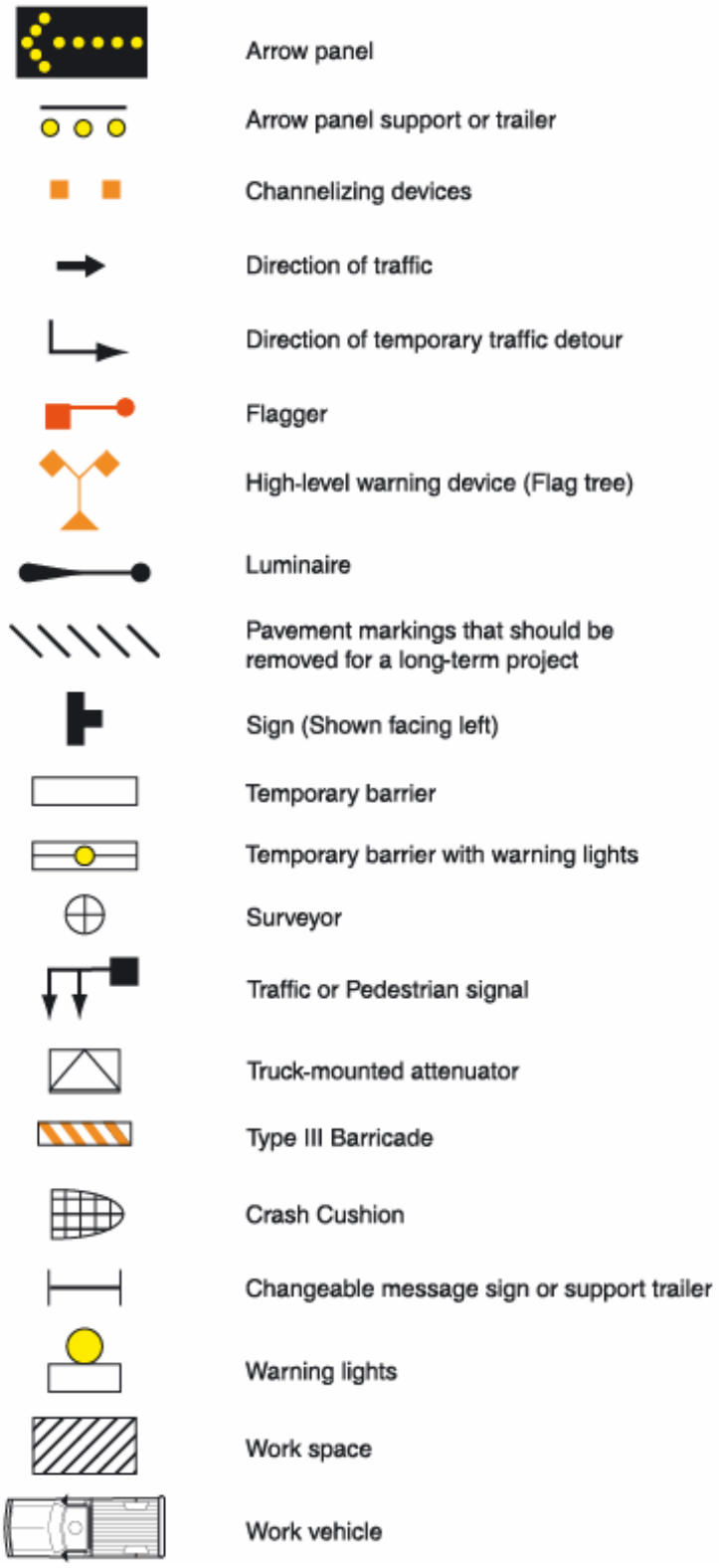


Table 6H-3. Suggested Advance Warning Sign Spacing

Road Classification	Posted Speed (MPH)	Sign Spacing (Feet)
Conventional Highways	30	120
	35	160
	40	240
	45	320
	50	400
	55*	500
	60*	600
	65*	700
	70*	800
	75*	900
Expressways or Freeways	All Speeds	See Typical Applications**

Notes:

*Distance between signs should be increased to have 1500 feet advance warning.

**Distance between signs should be increased to have ½ mile or more advance warning.

Formulas for L are as follows:

For speed limits of 40 mph or less:

$$L = \frac{WS^{2)}}{60}$$

For speed limits of 45 mph or greater:

$$L = WS$$

Where: L = taper length in feet
W = width of offset in feet
S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

Notes for Figure 6H-3 – Typical Application 3

Work on Shoulders

Guidance:

1. A SHOULDER WORK sign should be placed on the left side of the roadway for a divided or one-way street only if the left shoulder is affected.

Option:

2. The Workers symbol signs may be used instead of SHOULDER WORK signs.

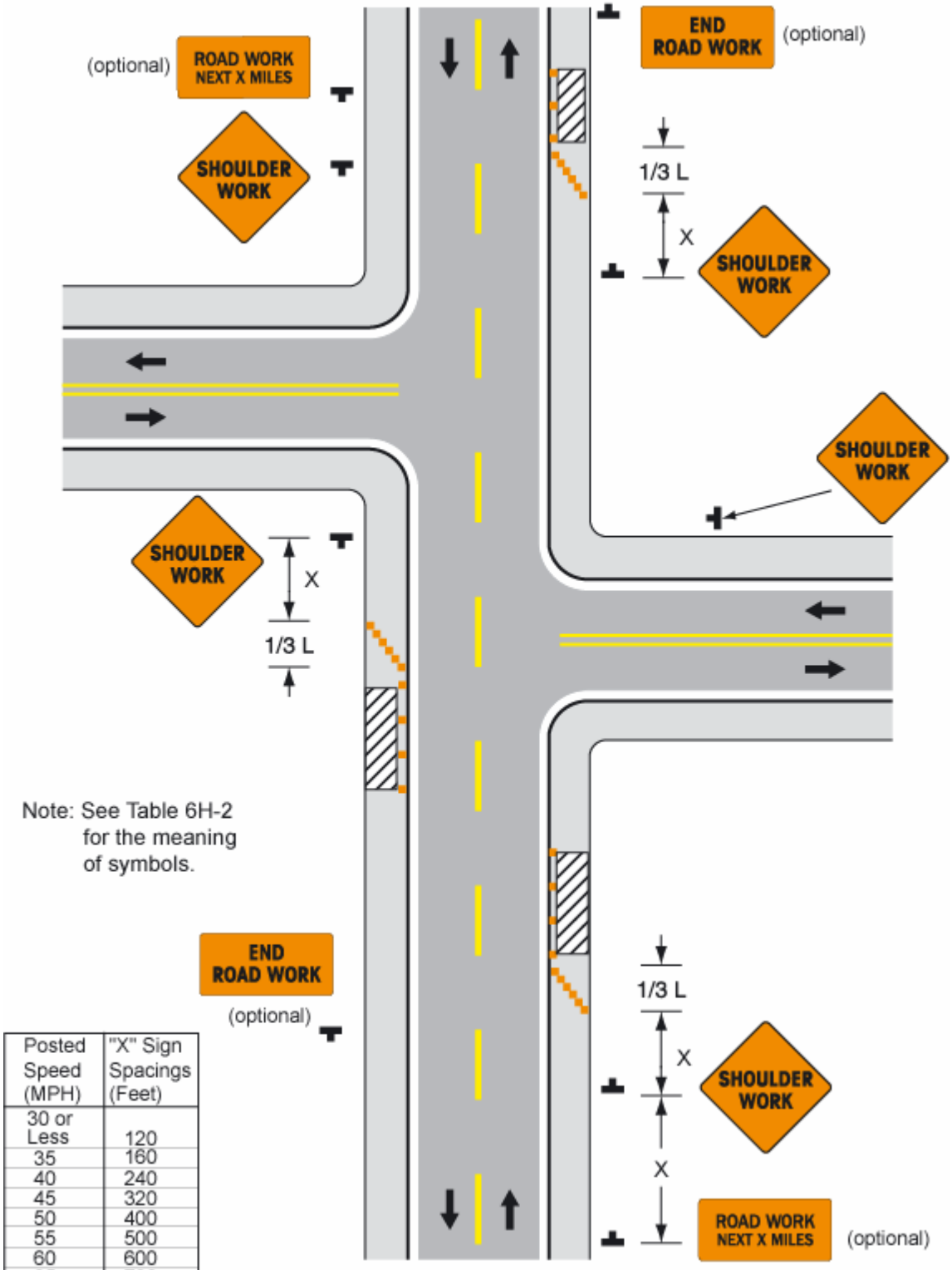
3. The SHOULDER WORK AHEAD sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.

4. For short-duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated rotating lights or strobe lights is used.

Standard:

5. Although vehicle hazard warning signals can be used to supplement the rotating lights or strobe lights, they shall not be used instead of rotating lights or strobe lights.

Figure 6H-3. Work on Shoulders (TA-3)



Posted Speed (MPH)	"X" Sign Spacings (Feet)
30 or Less	120
35	160
40	240
45	320
50	400
55	500
60	600
65	700
70	800

Typical Application 3

Notes for Figure 6H-5 – Typical Application 5

Shoulder Closure on Freeway

Guidance:

1. SHOULDER CLOSED signs should be used on limited-access highways where there is no opportunity for disabled vehicles to pull off the roadway.

2. If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure should be provided in meters or kilometers (feet or miles), as appropriate.

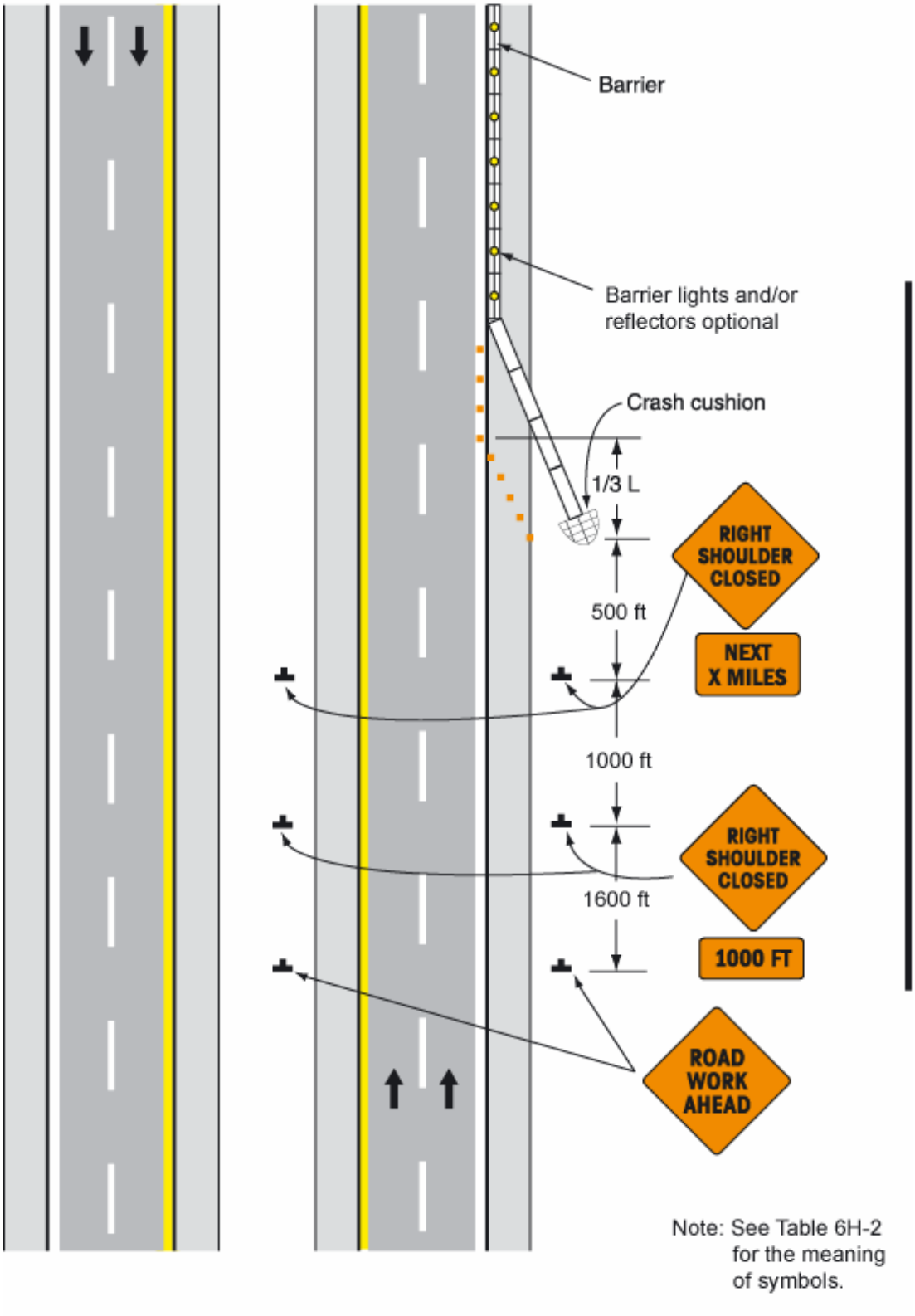
3. The use of a temporary traffic barrier should be based on engineering judgment. (see Section 6F.75).

Option:

4. The barrier shown in this typical application is an example of one method that may be used to close a shoulder of a long-term project.

5. The warning lights or reflectors shown on the barrier may be used.

Figure 6H-5. Shoulder Closure on Freeway (TA-5)



Typical Application 5

Notes for Figure 6H-6 – Typical Application 6

Shoulder Work with Minor Encroachment

Guidance:

1. All lanes should be a minimum of 3 m (10 ft) in width as measured to the near face of the channelizing devices.

2. The treatment shown should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.

Option:

3. For short-term use on low-volume, low-speed roadways with motor vehicle traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 2.7 m (9 ft) may be used.

4. Where the opposite shoulder is suitable for carrying motor vehicle traffic and of adequate width, lanes may be shifted by use of closely spaced channelizing devices, provided that the minimum lane width of 3 m (10 ft) is maintained.

5. Additional advance warning may be appropriate, such as a ROAD NARROWS sign.

6. Temporary traffic barriers may be used along the work space.

7. The shadow vehicle may be omitted if a taper and channelizing devices are used.

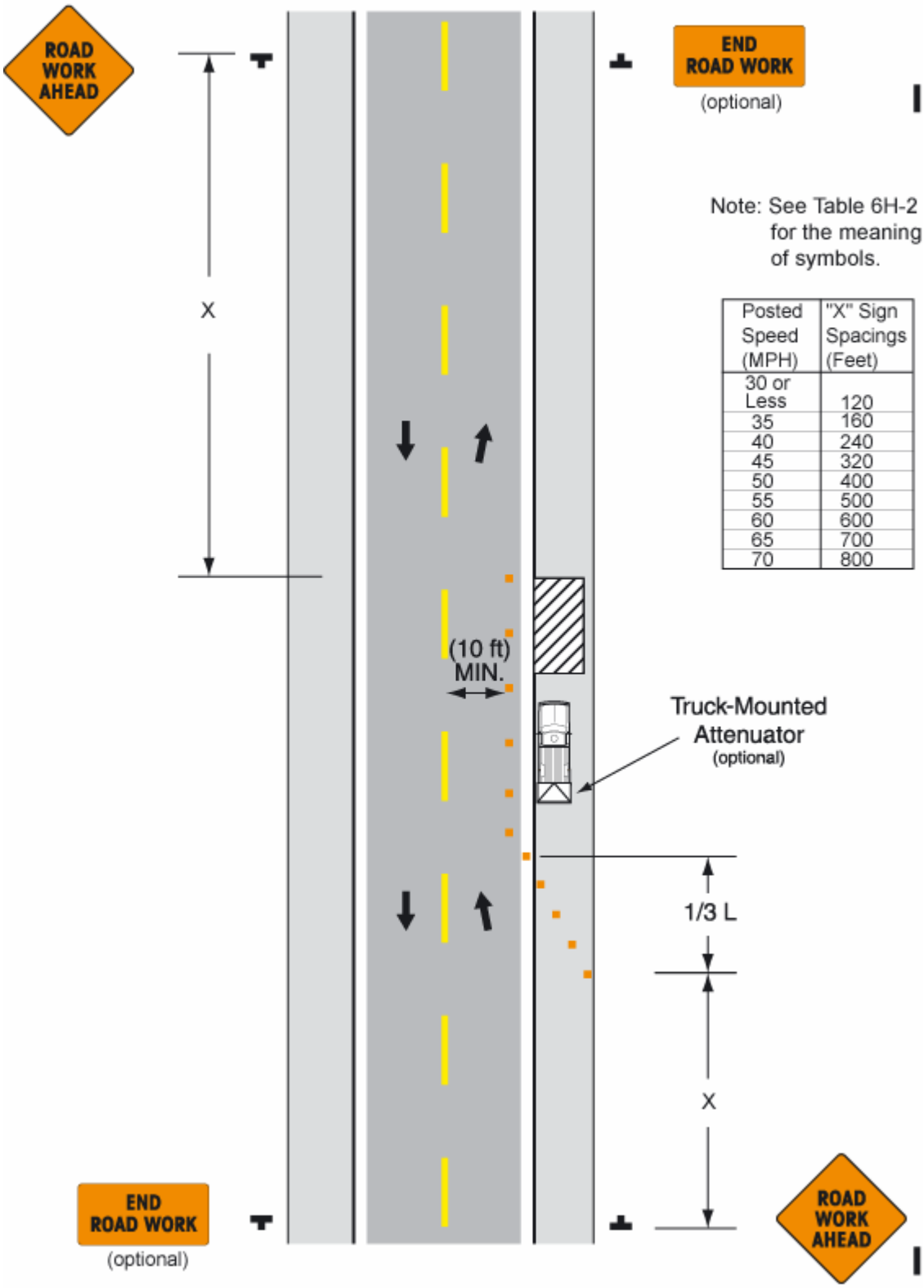
8. A truck-mounted attenuator may be used on the shadow vehicle.

9. For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated rotating lights or strobe lights is used.

Standard:

10. Although vehicle hazard warning signals can be used to supplement the rotating lights or strobe lights, they shall not be used instead of rotating lights or strobe lights.

Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)



Posted Speed (MPH)	"X" Sign Spacings (Feet)
30 or Less	120
35	160
40	240
45	320
50	400
55	500
60	600
65	700
70	800

Typical Application 6

Notes for Figure 6H-18 – Typical Application 18

Lane Closure on Minor Street

Standard:

1. This temporary traffic control shall be used only for low-volume, low-speed facilities.

Option:

2. Where the work space is short, where drivers can see the roadway beyond, and where volume is low, motor vehicle traffic may be self-regulating.

Standard:

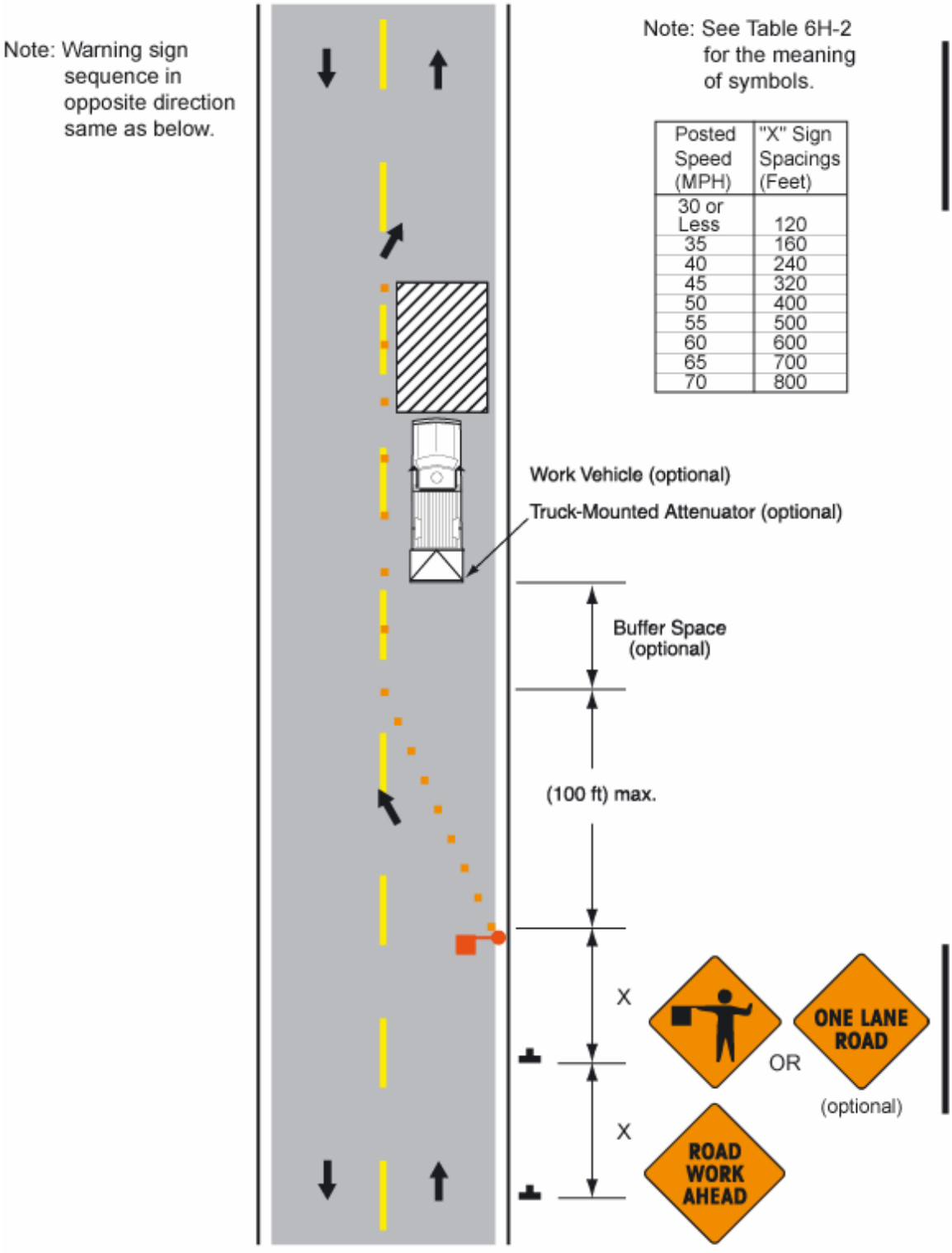
3. Where motor vehicle traffic cannot effectively self-regulate, one or two flaggers shall be used as illustrated in Figure 6H-10.

Option:

4. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

5. A truck-mounted attenuator may be used on the work vehicle and the shadow vehicle.

Figure 6H-18. Lane Closure on Minor Street (TA-18)



Typical Application 18

Notes for Figure 6H-33 – Typical Application 33

Stationary Lane Closure on Divided Highway

Standard:

1. **This information also shall be used when work is being performed in the lane adjacent to the median on a divided highway. In this case, the LEFT LANE CLOSED signs and the corresponding LANE REDUCTION signs shall be substituted.**

2. **When a side road intersects the highway within the temporary traffic control zone, additional temporary traffic control devices shall be placed as needed.**

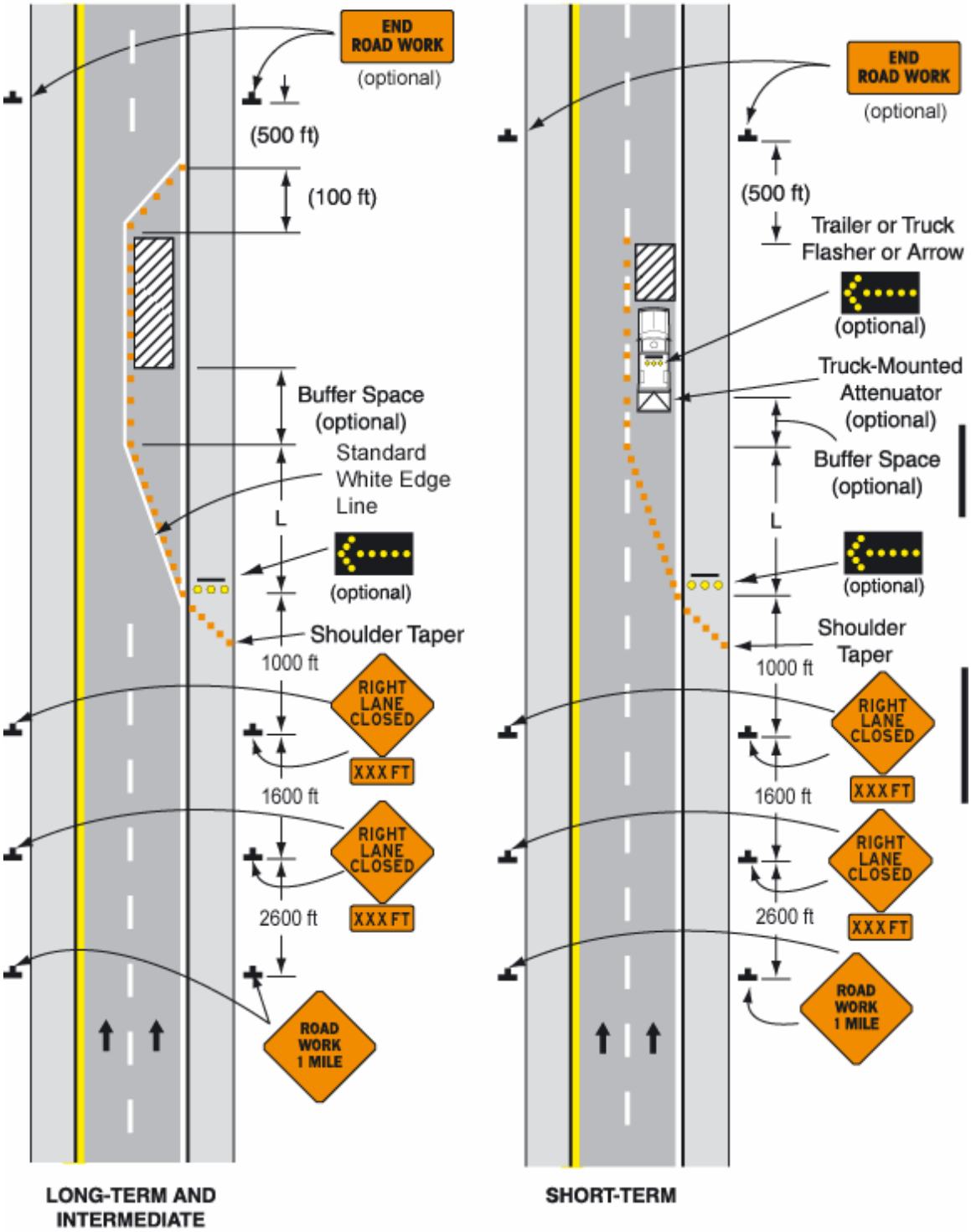
Guidance:

3. All vehicles, equipment, workers and their activities should be restricted to one side of the pavement.

Option:

4. A truck-mounted attenuator may be used on the work vehicle and/or shadow vehicle.

Figure 6H-33. Stationary Lane Closure on Divided Highway (TA-33)



Note: See Table 6H-2 for the meaning of symbols.

Typical Application 33

Notes for Figure 6H-34 – Typical Application 34

Lane Closure with Temporary Traffic Barrier

Guidance:

1. For long-term lane closures on facilities with permanent edge lines, a temporary edge line should be installed from the start of the taper to the downstream point where the barrier crosses the permanent edge line, and conflicting pavement markings should be removed.

2. The use of a barrier should be based on engineering judgment. For end treatments of temporary traffic barriers, see Section 6F.75.

Standard:

3. The barrier shall not be placed along the merging taper. The lane shall first be closed using channelizing devices and pavement markings.

Option:

4. The barrier shown in this typical application is an example of one method that may be used to close a lane for a long-term project. If the work activity permits, a movable barrier may be used and relocated to the shoulder during nonwork periods or peak-period motor vehicle traffic conditions, as appropriate.

5. Type C Steady-Burn warning lights may be placed on channelizing devices and the barrier parallel to the edge of pavement for nighttime lane closures.

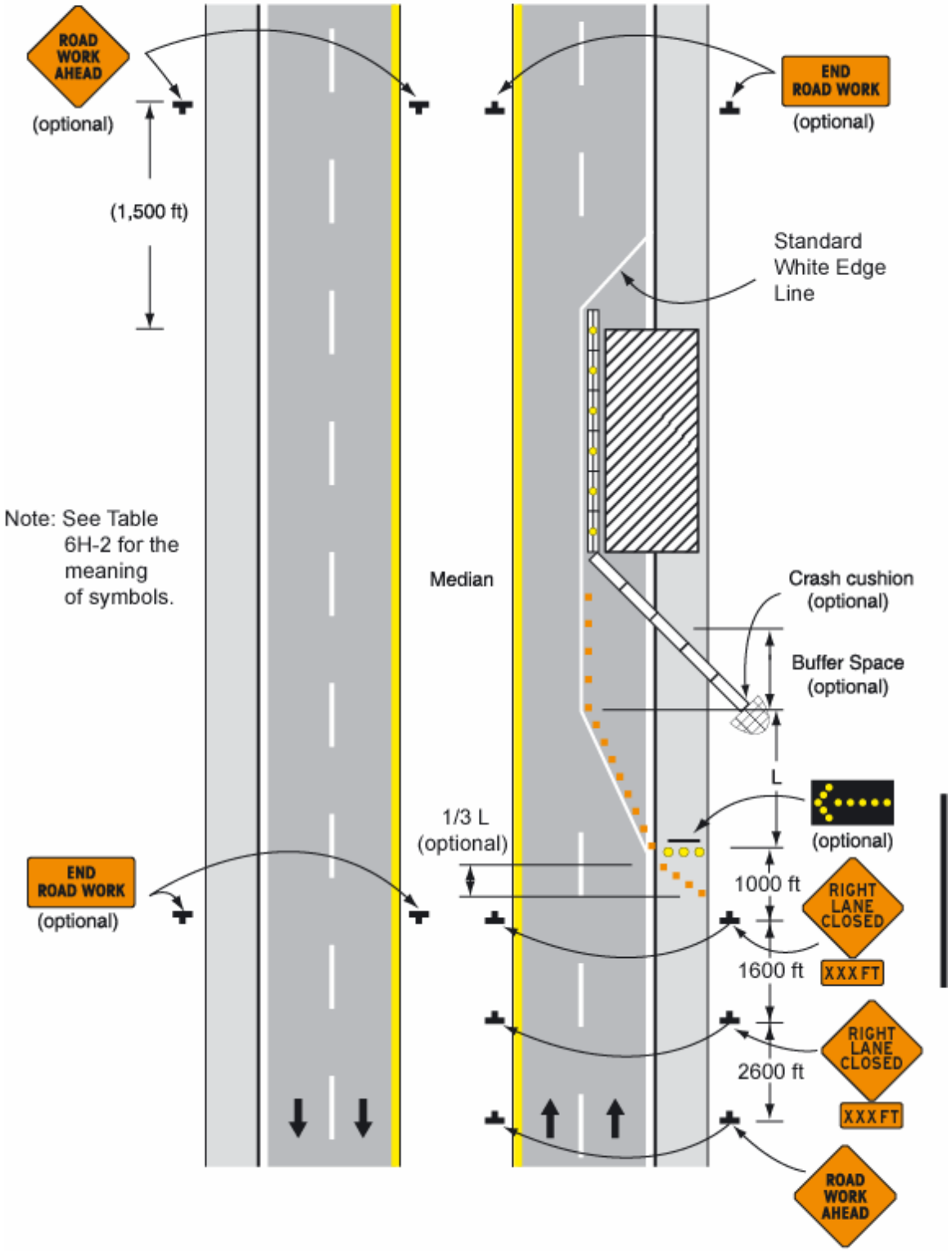
Standard:

6. If a movable barrier is used, the temporary white edge line shown in the typical application shall not be used. During the period when the right lane is opened, the sign legends and the channelization shall be changed to indicate that only the shoulder is closed, as illustrated in Figure 6H-5. The arrow panel, if used, shall be placed at the end of the shoulder taper and shall display the caution mode.

Guidance:

7. If a movable barrier is used, the shift should be performed in the following manner. When closing the lane, the lane should be initially closed with channelizing devices placed along a merging taper using the same information employed for a stationary lane closure. The lane closure should then be extended with the movable-barrier transfer vehicle moving with motor vehicle traffic. When opening the lane, the movable-barrier transfer vehicle should travel against motor vehicle traffic from the termination area to the transition area. The merging taper should then be removed using the same information employed for a stationary lane closure.

Figure 6H-34. Lane Closure with Temporary Traffic Barrier (TA-34)



Typical Application 34